CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 20.08.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
Date of Testing	20.08.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.5	477.4
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.50	22.60
7. Bitumen content in %	4.70	4.52
8. Average	4.61	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	31	31	6.5	93.5	90 - 100
19	72	103	21.6	78.4	71 - 95
13.2	64	167	35.0	65.0	56 - 80
4.75	87	254	53.3	46.7	38 - 54
2.360	79	333	69.9	30.1	28 - 42
0.300	95	428	89.8	10.2	7 - 21
0.075	24	452	94.9	5.1	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	34	34	7.1	92.9	90 - 100
19	74	108	22.6	77.4	71 - 95
13.2	66	174	36.4	63.6	56 - 80
4.75	82	256	53.6	46.4	38 - 54
2.360	77	333	69.8	30.2	28 - 42
0.300	91	424	88.8	11.2	7 - 21
0.075	21	445	93.2	6.8	2 - 8

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte - BBMP
Bangalore-560073

Authorised Signatory

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Corporate Off : No. 133, Bhuvaneshwarinagar, Doddabasti Main Road, Bangalore-560 056.
Contact : 8553518550, 080-23240644 Email : civilqualityconsultants@gmail.com

CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date: 20.08.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX

AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
Date of Testing	20.08.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.3	477.1
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.70	22.90
7. Bitumen content in %	4.54	4.58
8. Average	**4.56**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	28	28	5.9	94.1	90 - 100
19	73	101	21.2	78.8	71 - 95
13.2	68	169	35.4	64.6	56 - 80
4.75	84	253	53.0	47.0	38 - 54
2.360	79	332	69.6	30.4	28 - 42
0.300	88	420	88.0	12.0	7 - 21
0.075	28	448	93.9	6.1	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	29	29	6.1	93.9	90 - 100
19	71	100	21.0	79.0	71 - 95
13.2	69	169	35.4	64.6	56 - 80
4.75	78	247	51.8	48.2	38 - 54
2.360	72	319	66.9	33.1	28 - 42
0.300	94	413	86.6	13.4	7 - 21
0.075	31	444	93.1	6.9	2 - 8

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
R. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

Authorised Signatory

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CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

Date: 18.10.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX

AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
Date of Testing	18.10.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.4	477.3
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.60	22.70
7. Bitumen content in %	4.52	4.54
8. Average	4.53	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	19	19	4.0	96.0	90 - 100
19	65	84	17.6	82.4	71 - 95
13.2	89	173	36.2	63.8	56 - 80
4.75	57	230	48.2	51.8	38 - 54
2.360	61	291	61.0	39.0	28 - 42
0.300	91	382	80.0	20.0	7 - 21
0.075	75	457	95.7	4.3	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	25.9	25.9	5.4	94.6	90 - 100
19	70.5	96.4	20.2	79.8	71 - 95
13.2	56.9	153.3	32.1	67.9	56 - 80
4.75	87.1	240.4	50.4	49.6	38 - 54
2.360	79.5	319.9	67.0	33.0	28 - 42
0.300	89	408.9	85.7	14.3	7 - 21
0.075	51	459.9	96.4	3.6	2 - 8

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP

Authorised Signatory

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CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

Date: 18.10.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX
AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
Date of Testing	18.10.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.1	477
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.90	23.00
7. Bitumen content in %	4.58	4.60
8. Average	**4.59**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	35	35	7.3	92.7	90 - 100
19	69	104	21.8	78.2	71 - 95
13.2	64	168	35.2	64.8	56 - 80
4.75	81	249	52.2	47.8	38 - 54
2.360	76	325	68.1	31.9	28 - 42
0.300	93	418	87.6	12.4	7 - 21
0.075	30	448	93.9	6.1	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	31	31	6.5	93.5	90 - 100
19	79	110	23.1	76.9	71 - 95
13.2	68	178	37.3	62.7	56 - 80
4.75	83	261	54.7	45.3	38 - 54
2.360	77	338	70.9	29.1	28 - 42
0.300	98	436	91.4	8.6	7 - 21
0.075	19	455	95.4	4.6	2 - 8

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

Authorised Signatory

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CIVIL QUALITY
CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

Date: 08.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
Date of Testing	08.11.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	477.5	477.4
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	22.50	22.60
7. Bitumen content in %	4.50	4.52
8. Average	**4.51**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	33	33	6.9	93.1	90 - 100
19	44	77	16.1	83.9	71 - 95
13.2	66	143	29.9	70.1	56 - 80
4.75	99	242	50.7	49.3	38 - 54
2.360	77	319	66.8	33.2	28 - 42
0.300	89	408	85.4	14.6	7 - 21
0.075	34	442	92.6	7.4	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	28	28	5.9	94.1	90 - 100
19	77	105	22.0	78.0	71 - 95
13.2	88	193	40.4	59.6	56 - 80
4.75	49	242	50.7	49.3	38 - 54
2.360	71	313	65.6	34.4	28 - 42
0.300	87	400	83.8	16.2	7 - 21
0.075	47	447	93.6	6.4	2 - 8

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560073

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CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

Date: 08.11.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE GRADED BITUMINOUS MACADAM MIX AASHTO T 164 & AASHTO T 30

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**M/s. MSV Construction Company,** Bangalore.
Name of the Work	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
Date of Testing	08.11.2021

BITUMEN CONTENT DETERMINATION

Description	Test 1	Test 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.5	477.2
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.50	22.80
7. Bitumen content in %	4.70	4.56
8. Average	**4.63**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	36	36	7.6	92.4	90 - 100
19	75	111	23.3	76.7	71 - 95
13.2	68	179	37.6	62.4	56 - 80
4.75	83	262	55.0	45.0	38 - 54
2.360	69	331	69.5	30.5	28 - 42
0.300	79	410	86.0	14.0	7 - 21
0.075	37	447	93.8	6.2	2 - 8

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.10
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
37.5	0	0	0	100	100
26.5	33	33	6.9	93.1	90 - 100
19	71	104	21.8	78.2	71 - 95
13.2	69	173	36.3	63.7	56 - 80
4.75	79	252	52.8	47.2	38 - 54
2.360	83	335	70.2	29.8	28 - 42
0.300	88	423	88.6	11.4	7 - 21
0.075	28	451	94.5	5.5	2 - 8

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, Bangalore

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CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 06.09.2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	Executive Engineer, Dasarahalli Division, BBMP, Bangalore.
AGENCY	M/s. MSV Construction Company, Bangalore.
NAME OF THE WORK	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
DATE OF TESTING	06.09.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.5	473
3. Weight of Asphalt and Mineral matter Extracted, g	27.5	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.5	27
7. Bitumen content in %	5.50	5.40
8. Average	5.45	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	36	36	7.6	92.4	90 - 100
9.5	80	116	24.6	75.4	70 - 88
4.75	99	215	45.5	54.5	53 - 71
2.36	48	263	55.7	44.3	42 - 58
1.18	40	303	64.1	35.9	34 - 48
0.600	36	339	71.7	28.3	26 - 38
0.300	24	363	76.8	23.2	18 - 28
0.150	35	398	84.2	15.8	12 - 20
0.075	40	438	92.7	7.3	4 - 10

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	12.2	12.2	2.6	97.4	90 - 100
9.5	65.3	77.5	16.4	83.6	70 - 88
4.75	98	175.5	37.1	62.9	53 - 71
2.36	46	221.5	46.8	53.2	42 - 58
1.18	42.3	263.8	55.8	44.2	34 - 48
0.600	51.1	314.9	66.6	33.4	26 - 38
0.300	43.9	358.8	75.9	24.1	18 - 28
0.150	32.1	390.9	82.6	17.4	12 - 20
0.075	56	446.9	94.5	5.5	4 - 10

Assistant Executive Engineer
T. Dasarahalli Sub Division
Bagalagunte, BBMP
Bangalore-560 073

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For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

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CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
DATE OF TESTING	06.09.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.1	473
3. Weight of Asphalt and Mineral matter Extracted, g	27.9	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.9	27
7. Bitumen content in %	5.58	5.40
8. Average	5.49	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	12.2	12.2	2.6	97.4	90 - 100
9.5	65.3	77.5	16.4	83.6	70 - 88
4.75	99.1	176.6	37.4	62.6	53 - 71
2.36	47.6	224.2	47.5	52.5	42 - 58
1.18	42.3	266.5	56.4	43.6	34 - 48
0.600	51.1	317.6	67.3	32.7	26 - 38
0.300	43.9	361.5	76.6	23.4	18 - 28
0.150	46.8	408.3	86.5	13.5	12 - 20
0.075	32.5	440.8	93.4	6.6	4 - 10

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	16	16	3.4	96.6	90 - 100
9.5	65.3	81.3	17.2	82.8	70 - 88
4.75	98	179.3	37.9	62.1	53 - 71
2.36	46	225.3	47.6	52.4	42 - 58
1.18	42.3	267.6	56.6	43.4	34 - 48
0.600	51.1	318.7	67.4	32.6	26 - 38
0.300	43.9	362.6	76.7	23.3	18 - 28
0.150	32.1	394.7	83.4	16.6	12 - 20
0.075	49.2	443.9	93.8	6.2	4 - 10

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For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

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CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
DATE OF TESTING	22.10.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.5	472
3. Weight of Asphalt and Mineral matter Extracted, g	27.5	28
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.5	28
7. Bitumen content in %	5.50	5.60
8. Average	5.55	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	41	41	8.7	91.3	90 - 100
9.5	69	110	23.3	76.7	70 - 88
4.75	91	201	42.5	57.5	53 - 71
2.36	45	246	52.1	47.9	42 - 58
1.18	41	287	60.7	39.3	34 - 48
0.600	50	337	71.3	28.7	26 - 38
0.300	40	377	79.8	20.2	18 - 28
0.150	31	408	86.3	13.7	12 - 20
0.075	24	432	91.4	8.6	4 - 10

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	30	30	6.4	93.6	90 - 100
9.5	61	91	19.3	80.7	70 - 88
4.75	90	181	38.3	61.7	53 - 71
2.36	40	221	46.8	53.2	42 - 58
1.18	63	284	60.2	39.8	34 - 48
0.600	54	338	71.6	28.4	26 - 38
0.300	42	380	80.5	19.5	18 - 28
0.150	23	403	85.4	14.6	12 - 20
0.075	36	439	93.0	7.0	4 - 10

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For CIVIL QUALITY CONSULTANTS & ENGINEERS

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CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR Consultants

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
DATE OF TESTING	22.10.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.9	473
3. Weight of Asphalt and Mineral matter Extracted, g	27.1	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.1	27
7. Bitumen content in %	5.42	5.40
8. Average	5.41	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	26	26	5.5	94.5	90 - 100
9.5	64	90	19.0	81.0	70 - 88
4.75	92	182	38.5	61.5	53 - 71
2.36	42	224	47.4	52.6	42 - 58
1.18	45	269	56.9	43.1	34 - 48
0.600	35	304	64.3	35.7	26 - 38
0.300	42	346	73.2	26.8	18 - 28
0.150	39	385	81.4	18.6	12 - 20
0.075	63	448	94.7	5.3	4 - 10

SIEVE SIZE mm	Test 2				Requirement as per MORTH table 500.17
	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	25	25	5.3	94.7	90 - 100
9.5	62	87	18.4	81.6	70 - 88
4.75	91	178	37.6	62.4	53 - 71
2.36	64	242	51.2	48.8	42 - 58
1.18	52	294	62.2	37.8	34 - 48
0.600	50	344	72.7	27.3	26 - 38
0.300	34	378	79.9	20.1	18 - 28
0.150	31	409	86.5	13.5	12 - 20
0.075	32	441	93.2	6.8	4 - 10

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CIVIL QUALITY CONSULTANTS & ENGINEERS

Testing of Construction Material - Mechanical, Soil
Bitumen, Non Destructive Testing Services, Project
Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
DATE OF TESTING	17.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.9	472.3
3. Weight of Asphalt and Mineral matter Extracted, g	27.1	27.7
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.1	27.7
7. Bitumen content in %	5.42	5.54
8. Average	5.48	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Test 1				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	26	26	5.5	94.5	90 - 100
9.5	64	90	19.0	81.0	70 - 88
4.75	92	182	38.5	61.5	53 - 71
2.36	42	224	47.4	52.6	42 - 58
1.18	45	269	56.9	43.1	34 - 48
0.600	35	304	64.3	35.7	26 - 38
0.300	42	346	73.2	26.8	18 - 28
0.150	39	385	81.4	18.6	12 - 20
0.075	63	448	94.7	5.3	4 - 10

SIEVE SIZE	Test 2				Requirement as per MORTH table 500.17
mm	Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	25	25	5.3	94.7	90 - 100
9.5	62	87	18.4	81.6	70 - 88
4.75	91	178	37.7	62.3	53 - 71
2.36	64	242	51.2	48.8	42 - 58
1.18	52	294	62.2	37.8	34 - 48
0.600	50	344	72.8	27.2	26 - 38
0.300	34	378	80.0	20.0	18 - 28
0.150	31	409	86.6	13.4	12 - 20
0.075	32	441	93.4	6.6	4 - 10

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Testing of Construction Material - Mechanical, Soil Bitumen, Non Destructive Testing Services, Project Management Consultants, Third Party Quality Assurance, DPR

Job No : CQCE/BBMP/MSV/W.No.14/2021-22 Date : 17/11/2021

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**M/s. MSV Construction Company,** Bangalore.
NAME OF THE WORK	Improvement to CC road and drains at Defense Colony, Havanoor Layout, Munikondappa Layout in Bagalagunte and Improvements to roads and drains at 16th A cross 19th Cross and other cross roads at Bagalagunte main road, improvements to CC roads surrounding of Magnam school Bhuvaneshwari nagara at Bagalagunte ward no 14 (2 Works), BBMP, Bangalore.
DATE OF TESTING	17.11.2021

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	472.4	472.3
3. Weight of Asphalt and Mineral matter Extracted, g	27.6	27.7
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	27.6	27.7
7. Bitumen content in %	5.52	5.54
8. Average	5.53	

GRADATION AFTER EXTRACTION

SIEVE SIZE mm	Test 1 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	31	31	6.6	93.4	90 - 100
9.5	51	82	17.4	82.6	70 - 88
4.75	93	175	37.0	63.0	53 - 71
2.36	75	250	52.9	47.1	42 - 58
1.18	39	289	61.2	38.8	34 - 48
0.600	41	330	69.9	30.1	26 - 38
0.300	33	363	76.8	23.2	18 - 28
0.150	45	408	86.4	13.6	12 - 20
0.075	35	443	93.8	6.2	4 - 10

SIEVE SIZE mm	Test 2 Weight Retained, gm	Cummulative Weight Retained	%Cummulative Retained	% Passing	Requirement as per MORTH table 500.17
19	0	0	0	100	100
13.2	21	21	4.4	95.6	90 - 100
9.5	60	81	17.2	82.8	70 - 88
4.75	90	171	36.2	63.8	53 - 71
2.36	40	211	44.7	55.3	42 - 58
1.18	72	283	59.9	40.1	34 - 48
0.600	53	336	71.1	28.9	26 - 38
0.300	40	376	79.6	20.4	18 - 28
0.150	35	411	87.0	13.0	12 - 20
0.075	23	434	91.9	8.1	4 - 10

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